Attachment D

John Harsch

06/18/03 09:36 AM

 $To: \ Don \ Carlson/Kdhe@Kdhe, \ Karl \ Mueldener/Kdhe@Kdhe, \ Ron$

Hammerschmidt/Kdhe@Kdhe

cc:

Subject: Pork Association Comments on Groundwater Regs.

John Harsch

Livestock Waste Management Section E-mail: jharsch@kdhe.state.ks.us

Phone: (785) 296-0075 Fax: (785) 296-5509

Website: http://www.kdhe.state.ks.us/feedlots

---- Forwarded by John Harsch/Kdhe on 06/18/03 09:27 AM -----



"Tim Stroda" <tims@flinthills.com>

To: <jharsch@kdhe.state.ks.us>

cc:

06/17/03 03:22 PM

Subject:

John:

Attached are the committee's recommendations. They were sent in the mail to the Secretary.

Please call if you have any questions.

Thanks!

Tim Stroda

Director of Communications

Kansas Pork Association



- Final KPA Environmental Committee Recommendations.doc

KPA Environmental Committee

Recommendations/Comments on proposed KDHE regulations

The KPA appreciates the opportunity to be involved in the process and we look forward to continuing the dialogue. We also appreciate the attitude of the agency that the job of protecting our resources should be spread among all Kansans in an equitable fashion.

Groundwater protection proposals

- 1. The possible change from .25 inch construction standards to .10 is completely unacceptable. There is no science-based information that this will have any positive aspects in a balanced approach to protecting our resources and the competitive productivity of the pork industry. Construction costs would rise dramatically with no defined increases in protection of our resources.
- 2. The requirement of synthetic liners in "sensitive" groundwater areas also has no perceived science-based attribute. Additionally, the specification of any certain "thickness" of those liners would prohibit the industry from utilizing any new technology. We also have a concern about the area that is designated as "sensitive" and the inevitable expansion of that area.
- 3. The pork industry already has "site specific" requirements based on a number of factors. To implement additional requirements in regulation without a scientific basis does nothing more than raise costs to a Kansas industry.
- 4. The issue of "depth to groundwater" needs to be effectively addressed from a scientific basis with a balance between protection of our resources and protection of our industry's right to operate in an increasingly competitive world economy.

Closure

- 1. The basis for all of the closure language dates to the passage of H.B.2950. We stated this at the time and still reiterate that there has never been an instance when a public entity in Kansas had to cover the cost of closure. That threat was the sole battle cry of the proponents who included that language. To illustrate that point with actual numbers, 20 years ago, there were over 7500 swine operations; today, there are less than 1500. 6000 operations have "closed" and there has never been a negative impact on our resources. To impose further financial implications on our industry will not serve to protect our resources, but will most definitely serve to reduce our current 1500 operations to extinction. Please keep in mind that we are not operating a grocery or gas station that has to be local. Pork can be produced anywhere and placing Kansas at a completely unnecessary competitive disadvantage will merely take the state that is #9 in the nation's production out of business.
- 2. We would be open to discussion on the inclusion of a plan within a permit for the closure of a facility upon the retirement of the permit, but would strongly oppose any language of financial assurances.

Design Standards

1. We have mixed reactions upon the design standards. In one scenario, it allows flexibility to adapting to a certain site. On the other side, they also include language that is totally unneeded for the protection of our resources.

Miscellaneous:

- 1. Variances- We support the ability of the agency to grant variances if the situation's environmental conditions warrant.
- 2. Soil testing- We would encourage the agency to not impose additional requirements on the pork industry and/or dual agency oversight on our testing of land application areas. Using 2950 as an example, we are currently required to test for 5 specific compounds. KSU has already stated that 3 of those have never been an environmental issue in our state. Those 3 additional tests add a frivolous economic burden on our producers.

Dear John Harsh Livestock Chief KDHE

I would like to thank you and KDHE and your staff for all the time you spent explaining, listening, and taking notes about the concepts for the new regs. I think this has especially helped the Ag community understand and appreciatte what KDHE is trying to do. Thank you for attending the Equus Beds meeting the other night and I am sorry that we didn't get you on the program earlier but I am sure you helped alot of the directors out with their understanding of the regs. Mr. Dealy was asked to draft a letter with our decision and send it to you-I hope that it says what we asked for.

When formulating the new regs please base them on Sceintific facts and not on political sceince. If we are not finding polution from the current regs that are in place I have a hard time understanding why we need stronger regs. We as livestock producers have small profit margins and even 10,000 dollars extra for a synthenic liner is not going to help many farmers. Most producers will not even come close to capturing that cost from the benifits of the extra liner. We like to spend our capital outlays on items that return significant profits just like any other business. I do think that if there is a significant risk to the groundwater we would not have a problem with the mandatory liners. I know that the Wichita and Mr. Dealy have tried to propgandize that risk and make it seem real but I have't seen the facts to back up the propganda. Also, the vote we as a board took the other night was the second vote by our board disagreeing with the 1/64th seepage rate. That was one of the main reasons we had the letter last July by Mr. Dealy rescinded.

I am very concerned that the Equus Beds producers would be singled out for specific regs. This would tend to make it harder for us to compete as livestock procducers with procducers living outside the region. Their are many other sensitive groundwater areas in the state and we should probably be treated no differently. Unfortunately we have had a couple of people that have been very vocal in our area that don't understand the livestock industry and the waste management plans and how they work and I don't think we can educate them so I just ask that you base the new regs on good sceince.

One of my other concerns is the monitor wells. I think alot of times we feel that a monitor can tell us everything we want to know. I am concerned that all of the monitor wells we have put into the EB give a person that would want to contaminate the water ample places to pick from to directly infilitrate theeaquifer. I think that they serve their purpose but we need to make sure we only use them on a as needed bases or we will have to many access points for a crazy person.

I have many other thoughts but I think you have heard them all. Once again I appreciatte you and your department taking the time and effort to meet with us. The communication lines that were opened up by your visits I beleive will have long term benefits.

Thank you

RECEIVED

MAY 1 9 2003

BUREAU OF WATER

Chailman Equus BeDS.

Sorry my Didit

5/16/2003

John Harsch

05/14/03 01:20 PM

To: Roderick Bremby/Kdhe@Kdhe, Karl Mueldener/Kdhe@Kdhe, Ron Hammerschmidt/Kdhe@Kdhe

cc: Don Carlson/Kdhe@Kdhe, Theresa Hodges/Kdhe@Kdhe

Subject: Ground Water Management Meeting

Last night I attended the GMD 2 meeting in Halstead to discuss concepts and ideas for further protection of groundwater in the Equus Beds and state wide. It was a very interesting meeting. I went through our slide presentation and answered several questions from the board concerning requirements specific to the Equus Bed. Several of the board members didn't feel synthetic liners were needed if a soil linear could be constructed to protect groundwater. We received a lot of comments about the cost's of synthetic liners and that it would not prohibit any new construction or expansion of livestock facilities in the Equus Beds.

Jerry Blaine who is a GMD board member made a motion to support the regulatory concepts that I presented to the board to show that the GMD supported KDHE's efforts. The motion failed by a vote of 4 in favor and 5 not in favor of Jerry's motion. The board wasn't in agreement and engaged in some heated discussions.

We have met with several of the livestock groups during the past month including the GMD board and we will be compiling a list of comments and ideas/suggestions we have received. Please let me know when you would like to discuss what we have been hearing. thanks.

John Harsch

Livestock Waste Management Section E-mail: jharsch@kdhe.state.ks.us

Phone: (785) 296-0075 Fax: (785) 296-5509

Website: http://www.kdhe.state.ks.us/feedlots

John Harsch

05/12/03 03:15 PM

To: Don Carlson/Kdhe@Kdhe, David Freise/Kdhe@Kdhe, Mark Jepson/Kdhe@Kdhe

cc: Karl Mueldener/Kdhe@Kdhe, Don Snethen/Kdhe@Kdhe, Susan

Turner/Kdhe@Kdhe, Mark Bradbury/Kdhe@Kdhe

Subject: comments on livestock waste lagoon concepts

John Harsch

Livestock Waste Management Section E-mail: jharsch@kdhe.state.ks.us

Phone: (785) 296-0075 Fax: (785) 296-5509

Website: http://www.kdhe.state.ks.us/feedlots

---- Forwarded by John Harsch/Kdhe on 05/12/03 03:06 PM -----



Lisa French ks.usda.gov

To: "Harsch, John" <JHarsch@kdhe.state.ks.us>
cc: "VanCampen, Connie" <conniev@socencom.net>
Subject: comments on livestock waste lagoon concepts

05/12/03 02:52 PM

Attached are comments from the Citizen's Management Committee of the Cheney Lake Watershed regarding KDHE's proposed livestock lagoon concepts. Howard Miller is also mailing you hard copies of KSU's vegetated filter strip study.

Howard Miller and I are planning to attend the meeting tomorrow at the GMD#2 office in Halstead. I look forward to meeting you.

-Lisa French
Project Coordinator
Cheney Lake Watershed
18 E. 7th
S. Hutchinson, KS 67505
620-665-0231
www.cheneylakewatershed.org



- Comments on lagoon concepts.doc

Comments on Proposed Lagoon Liner Concepts

Citizen's Management Committee Cheney Lake Watershed, Inc. 18 E. 7th South Hutchinson, KS 67505 620-665-0231

May 9, 2003

Cheney Lake Watershed, Inc. is a private, non-profit organization associated with the Reno County Conservation District. This organization works with agricultural producers in the Cheney Lake Watershed to protect surface water quality. Currently, Cheney reservoir provides nearly 70% of Wichita's water supply. The eastern third of the watershed generally overlays a portion of the Equus Beds aquifer in Reno County.

For several years, Cheney Lake Watershed has worked to help livestock producers develop waste systems for small (under 300 animal units) feedlots and dairies that will prevent the contamination of streams within the watershed. We work closely with the Natural Resources Conservation Service (USDA) and with KSU Extension to design and install concrete storage structures to store solid wastes, lagoons to store run-off water from cattle lots, filter strips for run-off water, and other methods for capturing, storing, and cleaning surface water.

We also help farmers find cost share programs to fund these improvements. Typical funding sources include the State Conservation Commission's Non-point Source Pollution program (NPS), the USDA's Environmental Quality Incentives Program (EQIP), and supplemental funding from the City of Wichita's Water and Sewer Department for practices that protect surface water quality.

Suggested revisions or additional steps for groundwater protection:

- Protection measures for natural resources such as groundwater should be based on the characteristics of the resource rather than on political boundaries. The proposed regulations apply to the boundaries of GMD#2 rather than the natural boundaries of the aquifer. Regulations should be developed that are site-specificand that offer protection of all critical shallow groundwater resources across the state instead of a blanket regulation within a political boundary.
- Within the boundaries of the Equus Beds, depth to groundwater varies from less than 10 feet to more than 100 feet. Soil characteristics are equally variable. In keeping with the call for site specific, science-based regulations, impermeable liners may be appropriate in areas where the static water table is shallow and the existing soil cannot be used to create a soil liner that meets the seepage criteria. In areas where these criteria can be met, it would be more appropriate to use soil liners.

- Over-reliance on impermeable liners to protect groundwater may not be prudent. A
 breach in a synthetic liner caused by vandalism, accidental damage, rodents or other
 wildlife may create a less effective barrier than a could be afforded by a proper soil
 liner. Without an identified method of disposal, used liners may create a new problem
 for our communities. In short, we need additional information about impermeable
 liners including manufacturers, specifications, disposal, installation, and life
 expectancy before we can make good decisions regarding their use to protect our
 water resources.
- If a grandfather clause is employed for existing lagoons, it should be flexible enough to allow for revisions and improvements to the waste system and for permit renewal without loss of the grandfather protection as long as the lagoon does not pose a public health or environmental threat. This flexibility will encourage improvements rather than encouraging inaction.
- Lagoon regulations should allow for routine clean out of solids from livestock waste lagoons. If the soil liner is damaged during the clean out process, the producer should be allowed to rebuild the soil liner to meet the current seepage and separation criteria.
- Variances should be considered for existing livestock operations with less than 300 animal units and that have no waste system in cases where there are new technologies or alternative controls that can be implemented to provide some measure of groundwater or surface water protection.
- KDHE should commit to working pro-actively with KSU and NRCS to find lower-cost waste system alternatives for small livestock producers who want to protect surface water quality. This might include the use of filter strips or other bioengineering solutions that provide less than total containment of surface run-off but do not threaten groundwater supplies. For instance, a demonstration filter strip in the Cheney Lake Watershed has been shown to be effective in removing nutrients and bacteria in run-off water from a small, seasonal feedlot.
- All sections of KDHE should work in a coordinated fashion to support efforts by NRCS, KSU Extension, or other agencies and organizations to emphasize management practices that protect water quality. These might include practices that improve waste management such as timely and appropriate land application. Other management practices might include the employment of farming systems that emphasize grazing management rather than confinement of livestock.

John Harsch

05/01/03 04:52 PM

To: Karl Mueldener/Kdhe@Kdhe

cc: Ron Hammerschmidt/Kdhe@Kdhe, Don Carlson/Kdhe@Kdhe, David

Freise/Kdhe@Kdhe, Mark Jepson/Kdhe@Kdhe, Mark Bradbury/Kdhe@Kdhe, Susan Turner/Kdhe@Kdhe

Subject: Groundwater Meeting Comments.

Staff and I met with Farm Bureau on April 29th at 10:00 a.m. and we met with KLA and several livestock producers on April 29th at 7:00 p.m. in Newton. Both meetings went well. Attached is a summary of the comments we received from both meetings. Tomorrow afternoon we will be in Hutchinson at 4:00 p.m. meeting with about 20 dairy producers and the Dairy Association. May 13th at 7:00 p.m. we will meet with the GMD at Halstead. We have contacted the Kansas Cattleman's Association and the Kansas Pork Association several times but they haven't scheduled a time for us to meet with them yet. Please let me know if you have any questions. thanks.



John Harsch Livestock Waste Management Section E-mail: jharsch@kdhe.state.ks.us

Phone: (785) 296-0075 Fax: (785) 296-5509

Website: http://www.kdhe.state.ks.us/feedlots



RODERICK L. BREMBY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

DEPARTMENT OF HEALTH AND ENVIRONMENT

MEMORANDUM

TO:

Ron Hammerschmidt Ph.D., Director, Division of Environment

Karl Mueldener, Director, Bureau of Water

THROUGH:

John Harsch, Chief, Livestock Waste Management Program

FROM:

Mark Jepson, David Freise, Livestock Waste Management Program

DATE:

May 2, 2003

SUBJECT:

Groundwater Protection Regulations

Preliminary Comments from Out Reach Meetings

As planned, program staff have been meeting with various organizations to discuss potential measures to change the protection of groundwater in Kansas, particularly in the Equus Beds Area. With two meetings remaining in this initial outreach phase we are reporting some of the prevalent comments or themes which have been raised by the audiences.

- Equus Beds groundwater region should be treated no differently than other shallow groundwater areas
 - Great Bend
 - Portions of NE Kansas, etc.
- Synthetic Liner in Equus Beds/ Seepage Criteria
 - Why not allow soil and natural sealing?
 - How to remove solids build-up prevalent at open feedlots without wrecking the liner?
 - Liner Type, plastic/soil should be based on site specific depth to groundwater.
 - Should be performance standard not material standard (i.e. x/100ths of an inch per day, not "use synthetic material").

- Liner requirement should be site, not regional, specific
- Commercial, Industrial, Municipal, Agricultural, yes. What about household lagoons and septic tanks?
- How long will liner last versus a clay liner?
- How do you dispose of a liner?
- One-tenth of an inch, state wide, is too restrictive.
- Thickness of soil liner should be based on science.

Groundwater

- What is considered groundwater should be defined.
- How is depth to groundwater determined? What about seasonal fluctuations?

Costs

- How are these changes going to be paid for?
- Cities should pay since they are the most concerned about contamination
- KDHE economic impact statement will be scrutinized in detail by Ag. sector.
- Promised EQUIP funds are not being delivered.

Existing Lagoons

- Cities will next be asking for existing lagoons to be retrofitted.
- Why require upgrade if cleanout does not disturb existing soil seal?
- There needs to be criteria for what is a threat to human health (which could require an existing lagoon to be rebuilt.).

cc: SWDO, Mark Bradbury, Susan Turner

4/26/03
Don Carlson
Kansas Department of Health & Environment
Division of Environment
Bureau of Water
1000 SW Jackson Street, Suite 420
Topeka, KS 66612-1367

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APR 2 8 2003

BUREAU OF WATER

Re: Proposed KDHE Regulations for Wastewater

According to your public notice, the proposed KDHE regulations seem to be mostly concerned with municipal, commercial, and industrial wastewater lagoon liner regulations. However, the issue of Alternative Community Sewer Systems (ACSS), which don't necessarily utilize a lagoon system, should also be covered by the proposed regulations. I have spoken to Mark Bradbury, District Environmental Administrator, and he said that if two or more people (homeowners) hook up together for their wastewater collection, they would need a permit. They would also need to form some type of sewer district utility.

By way of some background, there is apparently a push by Sedgwick County to establish ACSS outside the city limits. For many people this is a sprawl issue, and would allow for leapfrog type cluster development in the county - but I realize that this issue is probably beyond the scope of the proposed regulations. It would appear that the first big development for ACSS would be in Bentley Meadows, which is located over the Equus Beds. I had talked with Irene Hart, Director of Development, Sedgwick County, and have a fairly good idea of how one ACSS systems work (i.e., Orenco Systems Inc.). I have also received good input from Mark Bradbury, who seems very knowledgeable about ACSS.

David Warren, Director, City Sewer & Water, had previously indicated that "package plants" (i.e, ACSS) were not good for the environment, but Bradbury feels that these were an older mechanical system and can't be compared to the new ACSS. According to Bradbury, when there are problems with the ACSS it's usually related to the long term operation and maintenance by private groups, and not the system itself. What Bradbury suggested was that Sedgwick County establish a county sewer district to provide appropriate oversight. He feels that having a government entity responsible as the permit holder will go along way to insure that the systems work properly.

I am not, however, as optimistic as Bradbury. In my view, ACSS are a new and untested technology. I think that there are a variety of concerns about these systems, some of which were mentioned by Bradbury at a recent presentation to the Southwind Sierra Club, Wichita.. I would suggest the following concerns: 1) the newness of the technology, 2) the nature of sewer utilities (i.e., public vs private - with private not accountable to the public, 3) who pays for the hookup to larger systems in the future, 4) who will pay to meet future water quality standards (e.g., nitrates, herbicide, etc.), 5) will there be long-term performance bonds, and 6) will there be site assessments by a certified soil profiler. Unless there are regulations covering ACSS, I would suggest that developers will utilize the wastewater collection and treatment system with

the lowest cost to install and maintain. Only appropriate regulations will require developers to be more accountable, and insure that precious groundwater is protected.

Bradbury said that KDHE was taking a caution approach on the use of ACSS in large community developments, but they don't want to reject the concept out of hand. Developers would need to bring in a properly prepared engineering report that lays out the proposed system for their engineers to review - just like is done on any public wastewater treatment system. In my opinion, appropriate regulations would be essential to this evaluative process.

Don Skokan 5825 Memphis

Wichita, KS 67220

don.skokan@wichita.edu



RODERICK L. BREMBY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

MEMORANDUM

DATE:

April 27, 2003

TO:

Municipal, Commercial and Industrial Wastewater Lagoon Reg File

FROM:

Donald R. Carlson

SUBJECT:

Ms. Bessie Black Conversation (2003-04-25)

On April 25, 2003 I returned a telephone call to Ms. Bessie Black who can be reached at (316) 796-1128. She indicated she had spoken at the KDHE meeting in Wichita on the evening of April 23, 2003. She wanted to relay two pieces of information that she did not address at the public meeting.

For the first issue, she noted that a couple of years ago they had a low spot on their property. She indicated that she had dirt hauled in to fill the low spot. Following the landscaping work, she tried to grow plants but couldn't. In tracking down the source of the soils she was advised that the reason she could not grow plants was because of herbicides in the soil. She indicated that she consulted with the local Co-op regarding the persistence of the herbicides in the soil and was told that the herbicides could last up to seven years. She indicated that she wanted KDHE to address the persistence of the pesticides in our regulations. I advised her that this was more of an issue with regard to the Kansas Department of Agriculture's administration of the Fertilizer and Pesticide Program. I provided her with the name of Mr. Gary Meyer who's telephone number is (785) 296-3786. I advised her that while I understood her concern that the applications of pesticides and herbicides are regulated by the Kansas Department of Agriculture, not KDHE. The point she was trying to make was if the Co-op is correct in regard to the persistence of the herbicides/pesticides for up to seven years then she was questioning the need for farmers to routinely apply this material to cropland on an annual basis. I suggested that rather than have me attempt to explain the process that

Memo to Municipal, Commercial, and Industrial Wastewater Lagoon Reg File April 27, 2003 Page 2

it would probably be better if she talked directly with someone with the Kansas Department of Agriculture. I advised her that following our conversation I would contact Mr. Meyer to advise him of her concern and to request that someone from their office call her and provide her with the information she was requesting. Following my conversation with Ms. Black, I was able to contact Gary Meyer's at the Kansas Department of Agriculture office in Topeka. I briefed him in regard to the proposed regulations and public meetings we had conducted and the specifics in regard to Ms. Black's concerns. I indicated that rather than my attempting to clarify technical issues associated with the application of pesticides and herbicides that it would probably be better for someone from his shop to give Ms. Black a call and to explain the situation to her. Gary indicated that he would give her a call.

The second issue that Ms. Black wanted to address was the Bentley Meadows Development. She indicated they had just received over two inches of rain and the soil in and around her home is so sandy that it doesn't even look as it had rained at all. She claims that she had gone before the County Zoning and Planning Boards as well as with the city to oppose the proposed Bentley Meadows Development project. Reportedly both the city and county had turned down the developer regarding the proposed project. She indicated the developer then went to the county commissioners where reportedly four of the five county commissioners had voted to allow the project. She noted that a bushel basket of mail had been sent to the newspapers and commissioners regarding the development and opposing it's approval. She also claimed that the City of Wichita had come out to the Bentley area and had threatened area farmers that they would simply condemn the farmer's land to get the water rights for city use. She indicated this had left a "bad taste" in the mouths of the area residents. She indicated that while she's not against people wanting water, she claims the big issue is the developers putting in septic tank systems in these proposed new developments and contaminating the Equus Beds groundwater aquifer. She stated that "You don't put a Brooks Landfill over the Equus Beds". She advised that in preparing the development of a report she had conducted research in the area regarding the area demographics in the year 2002. She advised there were a 179 "seniors" in the township and Bentley area. She noted there were four known cases of Parkinson's disease. She indicated that the medical community believes that Parkinson cases are the result of "environmental" factors. She noted also that she continues to see the Culligan man run up and down the road, meaning that groundwater in the area has already been contaminated. She noted that she can't drink her own water as she can take a glass of the water and set in on the counter for awhile and an oil film forms on the surface. It is her contention that this oil film is "pesticides". She also noted that area pumping has also dropped the water table significantly in the area of her water supply well. Her major point was that KDHE should not allow large developments to be approved on septic tank and lateral field systems and that we should be requiring that municipal utilities be extended to serve these areas.



April 25, 2003

Ms. Dorothy Geisler Bureau of Water Kansas Department of Health and Environment 1000 S.W. Jackson Street, Ste 420 Topeka, KS 66612-1367 RECEIVED

APR 2 8 2003

BUREAU OF WATER

Dear Ms. Geisler:

We are providing comments regarding the Proposed Municipal, Commercial, and Industrial Wastewater Lagoon Liner Regulations.

The economy of south-central Kansas is dependent upon the availability of high quality water resources and the presence of a regulatory environment that is encouraging to the needs of business while at the same time protective of human health and the environment. For these reasons, the Wichita Area Chamber of Commerce is an active participant in water and environmental issues.

The Equus Beds provides water for 20% of the state's population, both rural and urban. The City of Wichita is nearing the construction phase of a \$110 million project to recharge the Equus Beds in order to protect that valuable resource from encroaching salt. The recharge project will have the added benefit of providing additional supplies to the mid 21st century. With increasing investment, it is even more important to appropriately protect this valuable resource.

We support the need to protect the Equus Beds. In so doing, we request that needed protective measures be consistent with the following:

- 1. Regulations that are based upon research confirming their need.
- 2. Regulations that are science based and site specific.
- 3. Regulations that allow for appropriate development and economic opportunity.
- 4. Inclusion of agricultural wastewater lagoons within the new regulatory framework.

The proposed concepts will be protective but also have the potential of being overly regulatory. We encourage thoughtful consideration of measures that achieve the aforementioned strategies. And, we look forward to commenting on the specific regulations at the time of their release.

Thank you very much.

Sincerely, Herald H-Holman

Gerald H. Holman Senior Vice President

Robert D. Myers City Attorney

316/284-6018 316/283-7159 fax



PO Box 426 • Newton, Kansas 67114-0426

RECEIVED

APR 2 5 2003

BUREAU OF WATER

April 24, 2003

Dorothy Geisler Bureau of Water Kansas Department of Health and Environment 1000 S.W. Jackson Street, Suite 420 Topeka KS 66612-1367

Re: Proposed Municipal, Commercial and Industrial Lagoon Regulations

Dear Ms. Geisler:

To follow up on the oral testimony which I provided at the April 23 public meeting in Wichita, enclosed is the written version of my testimony.

Thank you for this opportunity to comment upon and provide input as to the development of these regulations.

I would like to be included in any further alerts which are issued, and receipt of notices or information my email is very acceptable. My email address is: bmyers@newtonkansas.com.

Thank you again.

Best regards,

Robert D. Myers Newton City Attorney

RDM:alt

Enclosure

316/284-6018 316/283-7159 fax



PO Box 426 • Newton, Kansas 67114-0426

Testimony Before The

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

In Relation To The

PROPOSED DEVELOPMENT OF REGULATIONS AND MINIMUM DESIGN STANDARDS FOR MUNICIPAL, COMMERCIAL AND INDUSTRIAL WASTEWATER LAGOONS

by

Bob Myers, City Attorney City of Newton, Kansas

April 23, 2003

My name is Bob Myers, and I am the City Attorney for the City of Newton. Thank you for the opportunity to address you today in relation to the proposed development by KDHE of regulations and minimum design standards for municipal, commercial and industrial wastewater lagoons.

The City of Newton has been a public water supplier for over 100 years. We derive our drinking water from the Equus Beds groundwater aquifer which underlies portions of Harvey, Sedgwick, Reno and McPherson Counties in South Central Kansas. Newton is one of twenty-five cities, plus three rural water districts, for whom the Equus Beds is either the sole or principal source of drinking water. Numerous farm families obtain their water directly from the aquifer, either for their own drinking water or for the water essential to serve their livestock or water their crops.

Altogether, the Equus Beds aquifer supplies high quality drinking water for approximately 500,000 Kansans, plus is an essential water resource for numerous businesses, industries and agricultural operations in this region of the State.

Of the five defined groundwater aquifer regions in the State of Kansas, the Equus Beds aquifer is unique. First, it is by far the most heavily relied upon as a drinking water resource. Second, it is the most vulnerable to pollution since a significant portion of the aquifer is relatively close to the

surface of the ground and is overlain by sandy or other highly porous soils through which pollutants can readily pass.

Portions of the aquifer have already been exposed to significant pollution from past activities which were not well regulated or which were not regulated at all. The taxpayers of the State of Kansas have already spent considerable sums of money attempting to deal with this past pollution, and we will continue to spend money addressing those problems for the foreseeable future.

We cannot afford to expose the aquifer to further pollution, either from a public health standpoint or from an economic standpoint, particularly when there is reasonable, affordable technology which exists to provide needed protections.

Prior to 1998 when it appeared that Kansas may have become a desired location for large-scale swine operations, enough public concern developed to prompt the Kansas Legislature to undertake a study about the safety and adequacy of lagoon systems as repositories for wastewater. The Kansas State Research and Extension was then commissioned to conduct a three-year scientific study, which included monitoring and performance testing of lagoon systems all over the State of Kansas.

Key findings which resulted from the K-State study included the following:

- Lagoon systems in Kansas of various types were found to be fairly consistent in terms of their seepage rates (seepage of lagoon contents through the bottom of the lagoon system), with seepage rates being small although not negligible.
- Even with low seepage rates, high concentrations of nutrients in effluent flowing into lagoon systems can cause a significant movement of nitrogen and other components into the underlying soils. Some nutrients (such as ammonium) typically remain within in a relatively shallow zone near the bottom of the lagoon while others (such as chloride) will penetrate to greater depths and readily move into shallow groundwater.
- The risk a lagoon system may pose to underlying groundwater is very site-specific and dependent upon a number of factors, such as: seepage rate; concentration of the waste; the types of soils and their properties beneath the lagoon; depth from the bottom of the lagoon to groundwater; and the length of time of use (or expected life) of the lagoon.
- One of the greatest risks for groundwater contamination occurs not while the lagoon is operating but after it is closed or abandoned.

In addition to pointing to aspects of lagoon systems which were not currently being addressed by regulations, this study also illustrated that a one-size-fits-all approach to lagoon system regulation was inappropriate -- that lagoon types and the conditions present at their prospective locations were significant factors in terms of what is necessary (or what is not necessary) in order to protect the environment.

In June of 2000 the City of Newton hosted an environmental forum following the release of the preliminary results of the K-State study. At that forum then KDHE Secretary Clyde Graeber announced that KDHE was proceeding immediately with the development of science-based, site-specific regulations for lagoon systems. However, those regulations were not then forthcoming.

We commend current KDHE Secretary Bremby and the KDHE staff for resurrecting this initiative.

The City of Newton strongly supports the concept of developing environmental regulations and standards on a science-based, site-specific basis. In the area of water quality, we have a large disparity just within the borders of our State as to geographic, geologic and other environmental conditions and as to the particular public health and safety needs.

If the science exists to support the implementation of site-specific regulations of any type, there is simply no reason not to so proceed. The issue of water quality is too complex and is too important to be governed by inefficient and often unfair standards which are uniform only for the sake or convenience of uniformity.

We had the opportunity to attend a prior session conducted by KDHE in which an outline of the proposed regulations was reviewed. We support the concepts and objectives contained in the proposed regulations and believe that this represents a reasonable approach to tailor the regulations, particularly as they would be applicable to sensitive groundwater areas such as the Equus Beds.

In particular, I offer the following comments:

- The requirement of a minimum of a 10-foot separation between the bottom of a lagoon and the top of any underlying groundwater is not an overly stringent requirement, and any lagoon which is that close to the groundwater will present a risk to the groundwater.
 - O Thus, it will be important that there be monitoring wells associated with any lagoon in an area of shallow groundwater.
- The adequacy of the 10-foot separation requirement will be tied directly to what the final regulations require in terms of minimum lagoon design specifications. Thus:
 - o If for any reason the final regulations allow a seepage rate for synthetic liners of more than 1/64th-inch per day; or
 - o If for any reason the draft requirements for synthetic liners in sensitive groundwater areas are otherwise lessened;

then the 10-foot separation distance requirement should be increased.

• Additional research should be conducted regarding the establishment of a required minimum thickness for synthetic liners, particularly as to lagoons in sensitive

groundwater areas, to determine what kind of a thickness is needed in order to gain optimum performance and protection.

- The need for a closure plan and some means of guaranteeing performance is critical.
 - As noted in the K-State study, the greatest danger a lagoon system poses to the groundwater is after it is no longer being actively used.
 - o If a bonding requirement to guarantee closure is cost-prohibitive, then some other means needs to be developed, either in substitution of or as a permitted alternative to a bond.
 - Development of a closure trust fund similar to what has been used for funding the removal of underground storage tanks would be ideal, if a way to fund this could be found.
 - Another option would be the development of a means by which the State would have a lien against the property to secure the costs of any necessary State action to carry out the closure -- and, ideally, this should be a "superlien" superior to any other lien or mortgage interest in the property.
- The availability of a variance from specific regulatory requirements will be an important part of these regulations, either where it can be shown that due to local conditions the danger the requirement is intended to address is not an applicable concern, or as an allowance for the use of new technologies.
 - This is an important element to maintain the flexibility of the regulations and to honor the concept of regulations being science-based and site-specific.

Finally, the regulations which are developed for municipal, commercial and industrial lagoons should then serve as the model on which the regulations are developed for agricultural lagoons.

I think it is extraordinary that KDHE administration and staff has undertaken these kinds of efforts to obtain input into the development of these regulations.

Thank you very much for the opportunity to address you in these critically important efforts.

SPECTRUM Technologists

P.O. Box 12863 Kansas City, KS 66112 (913) 334-0556

April 24, 2003

KDHE BOW 1000 S.W. Jackson St Su 420 Topeka, Ks. 66612 **RECEIVED**

APR 2 5 2003

BUREAU OF WATER

Attn: Dorothy Geisler

Subj. Comments for Public Meetings on Municipal, Commercial and Industrial Wastewater Lagoon Requirements.

This comment is submitted on behalf of the Kansas Chapter of the Sierra Club

Overall, the KDHE's approach is reasonable. We have just a few specific comments on the Corel presentation as follows:

General provisions.

Guidelines are needed to further define what is meant by "low pollution potential." While seepage will be diluted in most cases before reaching water wells, lagoons with soil liners can discharge relatively undiluted pulses of contaminants through cracks, channels and root holes Thus, it would be wise to peg concentrations of pollutants in lagoons to drinking water standards regarding classification as "low pollution potential." Thus concentrations of toxic pollutants in wastewater in excess of drinking water standards should warrant classification as significant pollution potential requiring the double liner for industrial process wastewater. Examples are toxic heavy metals such as cadmium, mercury, arsenic and chromium, pesticides and other toxic synthetic organic compounds, nitrogen in excess of 10 mg/l (as N) and salts in excess of 500 mg/l. There are others.

Soil liner design.

All soil liners should be compacted to 95% Proctor. A specification for a 6 or 12 inch support layer should also be established. Soil liners are subject to damage and cracking that can allow excessive seepage of even relatively benign lagoon contents. A low grade sand protective layer would be desirable.

Synthetic Liner Requirements

Minimum thickness should be 40 mil. Thinner membranes are more difficult to install without excessive leakage.

Closure requirements.

Financial assurance should be required for closure of industrial lagoons.

Sincerely,

Craig S. Volland, *QEP* President



April 23, 2003

City of Wichita Comments To Kansas Department of Health and Environment (KDHE)

RE: Public Meeting for Development of Proposed Regulations for Municipal, Commercial, Industrial, and Agricultural/Livestock Wastewater Lagoon Management

The City of Wichita has reviewed documents prepared by the Kansas Department of Health and Environment (KDHE) for discussion regarding development of proposed regulations for "Municipal, Commercial, Industrial, and Agricultural/Livestock Wastewater Lagoon Management". The City appreciates the opportunity to provide general comments on the issues as detailed below. Questions regarding this document can be directed to the following:

- Jack Brown, Environmental Health Director, Dept. of Environmental Health at (316) 268-8351 (Email to: jbrown@wichita.gov);
- David Warren, Director, Water & Sewer Department at (316) 268-4504
 (Email to: dwarren@wichita.gov);
- Jerry Blain, Water Supply Projects Administrator, Water and Sewer Dept. at (316) 268-4578 (Email to: jblain@wichita.gov)
- D. Kay Johnson, Environmental Compliance Manager, Dept. of Environmental Health (316) 268-8387 (Email to: kjohnson@wichita.gov).

1. General Concepts

The City of Wichita is only providing general comments regarding the subject proposed regulations based on the general guidelines of the regulations currently available. The City intends to provide additional specific comments when specific regulations are available for the City and the public to review.

2. Sensitive Groundwater Area Criteria

Over the years, the City of Wichita has expressed concern and provided specific information to KDHE regarding the importance of the protection of the Equus Beds Aquifer. This natural resource is classified by the State as a sensitive groundwater area due to distinctive soil, climate, geologic and hydrologic conditions which substantially increase the potential and vulnerability to contamination. The City of Wichita and other cities have existing water supply wells in the Equus Beds, which make this aquifer a vital water supply for the region. Therefore, this aquifer should have more stringent requirements for its protection.

The City of Wichita is supportive of KDHE's concepts to:

- A) Require additional synthetic liners for all types of wastewater treatment lagoons in the Equus Beds Aquifer;
- B) Require a site-specific upgradient and downgradient groundwater monitoring program for each wastewater treatment lagoon in the Equus Beds Aquifer;
- C) Require facility closure plans for wastewater treatment lagoons in the Equus Beds Aquifer;
- D) Require a separation of greater than 10 feet from a wastewater lagoon's bottom liner and the top of groundwater; and
- E) Prohibit new lagoons if this separation does not exist.

3. Existing Wastewater Treatment Lagoons

KDHE has recommended that existing facilities be grandfathered as long as they do not pose a public health or environmental threat. The City of Wichita agrees with this concept provided that all existing lagoons in the region of the Equus Beds have some type of periodic technical evaluation program, including some actual groundwater monitoring, to provide evidence that it is not a threat to human health or environment.

4. Historical Groundwater Elevation Data

Groundwater elevations in the Equus Beds can vary substantially with time. For instance, groundwater levels in July and August can be several feet lower than in January, due to the influence of irrigation water usage. They not only vary seasonally, but also over longer periods of time. Groundwater level monitoring by the U.S. Geological Survey has recorded that some areas in the City of Wichita's wellfield had declined as much as 40 feet between 1940 and 1993, and that some of those same areas have risen more than 20 feet since 1993.

Therefore it is recommended that "historical" maximum groundwater levels be used whenever possible to assure that there will be a minimum of 10 feet of separation between the bottom of a lagoon and the groundwater.

5. Improve Education Programs for Groundwater and Natural Resources

The City of Wichita would also like to strongly encourage that an aggressive education program be initiated for Kansas citizens to bring about a better understanding of all water resource protection (both groundwater and surface water) and conservation concepts as well as the critical relationship of the Kansas economy and groundwater resource use. Our state is sadly lagging behind many others in protecting and conserving our natural resources as evidenced by the judicial court rulings requiring regulatory improvements over the last several years.

Summary

The City of Wichita reiterates its continued concern over the protection of the Equus Beds Aquifer and believes that higher standards such as those discussed in the KDHE concept documents are required in areas that are designated as "Sensitive Groundwater Areas". The City of Wichita applauds the idea of increasing statewide groundwater protection standards as well as taking into consideration site-specific information to develop site-specific standards for wastewater treatment lagoons of all types.

Additional Request

The City of Wichita also requests a copy of KDHE's Policy Memorandum #90-2 (September, 1990) titled, "Industrial Wastewater Pond Liner Policy" within 10 days of the receipt of these comments. It is stated in supporting documentation (posted on KDHE's website at http://www.kdhe.state.ks.us/water/index.html - Proposed Lagoon Liner Regs on Page 1, No. 1) that KDHE intends to make this information an "enforceable part of KDHE's Minimum Standards of Design for Water Pollution Control Facilities, 1978." The City of Wichita has been unable to obtain or find a reference to this document on KDHE's Internet site. We also urge KDHE to publish, as required by law; recently reaffirmed by passage of amended House Bill 2219; and recently signed by Governor Kathleen Sebelius; this and all other KDHE policies. To assure compliance and continued program continuity, it is critical that these important documents are made available to the public.



ANDOVER Mayor Dennis Bush

ARKANSAS CITY

Commissioner Charles Jennings

AUGUSTA Mayor Ross Rountree

BELAIRE

Mayor Gary O'Neal

BENTLEY Mayor Sandra Wellman-Moon

BENTON

Mayor Rebecca Edson

BUTLER COUNTY Commissioner Will Carpenter

> CHENEY Mayor Carl Koster

CLEARWATER

Council Member David Wells
CONWAY SPRINGS

Mayor Wayne Taylor

DERBY Mayor Richard Standrich

EL DORADO

Mayor Connie Phillips

HALSTEAD

Mayor Bill Ewert

HARVEY COUNTY Commissioner Kenneth Meier

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ROSE HILL

Council Member Marsha Francis

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Mayor D. Keith DeHaven

SEDGWICK COUNTY

Commissioner Carolyn McGinn

SUMNER COUNTY
Commissioner Robert Courtney

mmissioner Robert Courti

TOWANDA Mayor Leonard Albert

VALLEY CENTER Mayor James 'Jet' Truman

WELLINGTON

Mayor James Chisham

WICHITA

Mayor Bob Knight

WINFIELD Mayor Mike Ledy

Regional Economic Area Partnership

strengthening the economy of south central Kansas through joint action of cities and counties

Resolution No. 03-01 A RESOLUTION BY THE REGIONAL ECONOMIC AREA PARTNERSHIP IN SUPPORT OF GREATER PROTECTION FOR THE EQUUS BEDS AQUIFER

WHEREAS, the Equus Beds aquifer is the principal source of fresh and usable water in South Central Kansas wherein over 1600 non-domestic water wells withdraw approximately 51.2 billion gallons from the aquifer each year to provide drinking water for 20 percent of the State's population, and to support a large percentage of the State's business, industrial and agricultural base; and

WHEREAS, the aquifer provides fresh and potable water daily to more than 500,000 people and over 15,000 businesses in the REAP area and is the principal or significant public water supply for the communities of Andover, Bel Aire, Benton, Bentley, Buhler, Burrton, Canton, Galva, Halstead, Haven, Hesston, Hutchinson, Kechi, Moundridge, Mount Hope, Newton, North Newton, Park City, Pretty Prairie, Rose Hill, Sedgwick, South Hutchinson, Valley Center, and Wichita, and the Equus Beds aquifer provides groundwater for hundreds of agricultural producers and industries in the region; and

WHEREAS, the Equus Beds aquifer is a priceless natural resource and classified by the State as a sensitive groundwater area due to the distinctive soil, climate, geological and hydrologic conditions which substantially increase the potential and vulnerability to contamination in the Equus Beds region; and

WHEREAS, the Equus Beds aquifer is critical to the ongoing well-being of the citizens, businesses and industries that form the regional economy of South Central Kansas; and

WHEREAS, current environmental laws and regulations, as applied to activities in the Equus Beds aquifer, fail to provide sufficient protection for preserving and protecting the Equus Beds and the groundwater that serve the residents, businesses and industries of South Central Kansas who rely on these vulnerable and environmentally sensitive resources for daily needs such as water supply, irrigation, health, safety and the overall economic livelihood of the region; and

WHEREAS, studies such as those commissioned by the State of Kansas and conducted by Kansas State University have clearly demonstrated the necessity of regulations and standards that are based on the specific environmental conditions in a particular location, and have clearly demonstrated the inadequacy of one-size-fits-all regulations; and

WHEREAS, these studies have provided the basis for science-based regulations and standards which can be applied on a site-specific basis; and

WHEREAS, the thirty-one REAP member communities throughout six counties in South Central Kansas have joined together to guide state and national actions that affect economic development in the region and to adopt joint actions among member governments that enhance the regional economy;

NOW, THEREFORE, BE IT RESOLVED, by the Regional Economic Area Partnership, that Governor Sebelius is hereby urged to direct and support efforts by the Kansas Department of Health and Environment and other State agencies to continue to recognize the importance of the Equus Beds aquifer to the future of South Central Kansas and direct and support the development and adoption of science based, site-specific water quality regulations, particularly in sensitive groundwater areas such as the Equus Beds aquifer.

ADOPTED this 10th day of February, 2003

Mayor Mike Ledy, Winfield

REAP Chairman

Voith Lawing

Attest

REAP Executive Officer

Comments to the Kansas Department of Health and Environment From the Regional Economic Area Partnership Public Hearing on Commercial, Domestic and Industrial Wastewater Lagoon Regulations 4/23/03

Mr. Keith Lawing, REAP Executive Officer

Good evening, my name is Keith Lawing and I am the Executive Officer for the Regional Economic Area Partnership, or REAP.

REAP is a council of local governments in South Central Kansas. The thirty-one city and county governments in REAP have voluntarily joined together for two primary purposes: first, to guide state and national actions that affect economic development in the region; and second, to adopt joint actions among member governments that enhance the regional economy.

REAP Chairman, Mayor Mike Ledy of Winfield, could not be here this evening and asked that I provide comments on his behalf.

One of the most significant regional priorities for REAP is the protection of the public water supply in South Central Kansas. The Equus Beds aquifer is a primary source of water for many REAP communities; and is clearly critical to the economy of South Central Kansas.

The members or REAP believe that the protection of the aquifer must be enhanced by the adoption and enforcement of site specific regulations. The geography and geology of the Equus Beds is unique to other aquifers in the state and it appears obvious that a one-size fits all approach to water protection is not good public policy for the state of Kansas.

On February 10, 2003, the local government in REAP adopted a resolution supporting greater protection of the Equus Beds aquifer. I have copies to distribute.

Members of REAP have had the opportunity to meet with Secretary Bremby and KDHE staff and they are pleased with the commitment that is now being brought to the issue of groundwater protection. On behalf of REAP I would like to thank Secretary Bremby and KDHE for making this issue a high priority.

We are anxious to review the regulations when released and look forward to working with KDHE and other stakeholders in helping to protect the Equus Beds aquifer.

Thank you for your time this evening and I will respond to any questions.



To: <dcarlson@kdhe.state.ks.us>

cc:

Subject: Proposed KDHE Municipal Lagoon Regs

April 28, 2003

Don Carlson, KDHE

Subject: Proposed Municipal, Commercial, and Industrial Wastewater Lagoon Liner Regulations.

Thank you for the opportunity to speak to the proposed regulations at the April 23 public meeting in Wichita. The number and nature of comments from speakers at that particular meeting are very encouraging.

One provision requires further comment from KNRC. The "grandfathering-in" of existing lagoons is a reasonable accommodation to property owners IF that action does not undermine the intent of the rest of the proposed regulations and does not reduce the protection for the Equus Bed groundwater.

Accordingly, KNRC urges that "grandfathering-in" under the new regulations should be authorized on a site by site basis, with appropriate tests for current leakage and negative results as the basis for approval. It is not unreasonable to expect property owners to apply to KDHE for such consideration, and not unreasonable for them to pay for the testing necessary to justify relief from providing the protection that is clearly necessary to protect the aquifer. The purpose of the proposed regulations is to protect a very vulnerable resource and "grandfathering" considerations must not become the provision that undermines that protection in spite of everyone else's compliance and expense.

Thanks again for the opportunity to comment on these proposals. Please call me at the number below if there are questions.

Jay Barnes, Executive Director

Kansas Natural Resource Council

Box 21346

Wichita, KS 67208

316-686-6043

jay@knrc.ws

www.knrc.ws



hforaker

04/28/2003 03:35 PM
Please respond to

To: <dgeisler@kdhe.state.ks.us>

CC:

Subject: Lagoon Liner comments

Ms. Geisler:

It is my comment that the new minimum standards should continue to contain a provision which allows the KDHE staff to

granta variance when a design standard cannot be met. Specifically, the implementation of a 10' minimum groundwater separation without exceptions regardless of the type of liner technology used is short sighted and with no scientific basis. It would be my recommendation the soils engineer beallowed to provide a professional recommendation on the separation recommended for a particular type of soil line or HDPE liner used. Base the separation distance on a scientific evaluation of the percolation rate of the soils to be used or the installation of a HDPE liner and the risk of groundwater pollution. I believe there should certainly be more stringent design requirements for the liner in shallow groundwater conditions such as thicker soil liners or the requirement for an HDPE liner. However, there are many small communities and also small livestock operators that could possibly be prevented from expanding existing lagoons if 10' separation to groundwater is mandated withoutthe ability of KDHE to grant a variance based upon a scientific recommendation from a soils professional.

Currently, the 10' minimum separation is being applied to soil lined lagoons. If an HDPE liner is implemented the separation distance is permitted to be less with a variance from KDHE. This policy should continue and the soils engineer or the design engineer should be permitted to provide the necessary scientific basis to allow a reduction in the separation to groundwater in situations in which a more complex soil liner design is implemented or a HDPEliner is used. The separation to groundwater should be permitted to be reduced based upon type of liner used and scientific evaluation of pollution threat.

Harlan D. Foraker, P.E.

CED, PA

Karl Mueldener

To: Don Carlson/Kdhe, John Harsch/Kdhe@Kdhe

04/23/03 03:16 PM

cc:

Subject: RE: Proposed regulations

FYI

---- Forwarded by Karl Mueldener/Kdhe on 04/23/03 04:09 PM ----



"Bob Myers"

bmyers@newtonkansas.

To: <KMuelden@kdhe.state.ks.us>

cc:

Subject: RE: Proposed regulations

04/23/03 01:54 PM

Thanks for your comments. I made some minor adjustments to the wording (nothing substantive), and also included a bit of explanation as to how the variance procedure might work, based upon your additional comments. The revised version of the outline is attached.

Again, thanks for your time in reviewing this. I am planning on providing this to the REAP staff for possible circulation to REAP members who may not otherwise hear one of the presentations.

Bob Myers Newton City Attorney 201 East 6th, PO Box 426 Newton KS 67114-0426 Phone: 316-284-6018 Fax: 316-283-7159 bmyers@newtonkansas.com



- Overview of Issues Regarding Draft Regs.doc

Overview of Issues Regarding Prospective Science-Based, Site-Specific Groundwater Protection Regulations Under Development By Kansas Department of Health and Environment

Key findings by the three-year study conducted from 1998 through 2001 by Kansas State Research and Extension as commissioned by the Kansas Legislature included the following:

- Lagoon systems in Kansas of various types were found to be fairly consistent in terms of their seepage rates (seepage of lagoon contents through the bottom of the lagoon system), with seepage rates being small although not negligible.
- Even with low seepage rates, high concentrations of nutrients in effluent flowing into lagoon systems can cause a significant movement of nitrogen and other components into the underlying soils. Some nutrients (such as ammonium) typically remain within in a relatively shallow zone near the bottom of the lagoon while others (such as chloride) will penetrate to greater depths and readily move into shallow groundwater.
- The risk a lagoon system may pose to underlying groundwater is very site-specific and dependent upon a number of factors, such as: seepage rate; concentration of the waste; the types of soils and their properties beneath the lagoon; depth from the bottom of the lagoon to groundwater; and the length of time of use (or expected life) of the lagoon.
- One of the greatest risks for groundwater contamination occurs not while the lagoon is operating but after it is closed or abandoned.

With these findings in mind, the Kansas Department of Health and Environment (KDHE) is considering adoption of regulations which would establish minimum design specifications for various types of lagoons (municipal, commercial, industrial and agricultural).

KDHE staff proposes that these regulations would include a variance procedure by which those specifications could be modified either (a) to allow for use of new technologies, or (b) to take into consideration local conditions which would allow lessening of those restrictions or requirements.

Elements of the new regulations would include the following:

- No new lagoons of any type would be permitted in any location where the bottom of the lagoon would be 10 feet or less from groundwater.
 - Existing lagoons would be grand-fathered in as long as there is no evidence of immediate threat to human health or the environment.
 - o Existing lagoons which are found to pose some hazard may be permitted to be

re-lined or to be substantially cleaned out and rebuilt.

- New lagoons would be subject to the following application and permit requirements:
 - o Application must include identification of water, oil and gas wells within 600 feet of proposed location.
 - O Borings would be required to be taken at the prospective site to identify the soil types present and the depth to groundwater.
 - O The permit application must include a lagoon closure plan.
 - Regulations will specify required contents of a closure plan and periodic closure plan updating.
 - Currently under consideration are means of insuring closure, such as bonding requirements, lien provisions, etc.
 - O All new lagoons must be of a design and construction certified to satisfy a maximum allowable seepage rate of 1/10-inch per day, except industrial lagoons used for process wastewaters which will be subject to a maximum allowable seepage rate of 1/64-inch per day.
 - o Lagoon liner requirements:
 - Municipal and commercial lagoons may use native or compacted soil liners or single-membrane synthetic liners; except soil liners not permitted in sensitive groundwater areas.
 - Industrial lagoons:
 - If used for domestic waste or for low pollution potential waste (such as non-contact cooling water runoff), may use soil or single-membrane synthetic liners with 1/10-inch per day maximum seepage rate; except soil liners not permitted in sensitive groundwater areas.
 - If used for higher pollution potential waste (such as process wastewater), must use dual synthetic membrane liner system with an intermediate leak detection system between the two liners.
 - Agricultural lagoons (all species) must use a single synthetic liner.
 - O Synthetic liners must meet certain minimum thickness requirements.
 - Specific minimum thickness requirements are still under consideration.

Possibly 30 mil.

- o Lagoon embankment compaction requirements to be specified.
- O Seepage testing will be required prior to commencement of permitted use.
- o Monitoring wells required if KDHE determines the necessity.
 - KDHE must approve monitoring well design and location.
 - Provisions to be included to allow consideration of "equivalent technology" in lieu of monitoring wells, upon review and approval by KDHE.
- Notices to be given KDHE at certain stages of borings, construction or testing to enable KDHE witnessing.
- o Operational standards to include:
 - Effluent guideline standards.
 - Effluent limits.
 - Pretreatment requirements.
 - Other performance standards.
- O Notice to be given KDHE prior to lagoon closure or abandonment.
 - Permit requirements to be maintained prior to approved closure.
 - Closure to be accomplished in a specified time frame.
- Variance procedures are to be included in the regulations and would include the following:
 - O Variances may be granted to allow for the use of new technologies which satisfy the objectives of the regulations.
 - O Variances may be granted where it can be shown that the specific characteristics of the site are such that certain requirements may be lessened or waived without endangering the environment.
 - An applicant for a variance would bear the burden of proof.



Dorothy Geisler

04/28/03 09:03 AM

To: Don Carlson/Kdhe@Kdhe

cc:

Subject: New Laggon Regs - Comments

FYI

Dorothy Geisler
Bureau of Water - Industrial Programs Section
1000 SW Jackson, Ste. 420
Topeka, KS 66612-1367
(785) 296-5545
DGeisler@kdhe.state.ks.us
----- Forwarded by Dorothy Geisler/Kdhe on 04/28/2003 09:06 AM -----



et

cjras@postoffice.swbell.n

To: Dgeisler@kdhe.state.ks.us

cc:

04/27/2003 09:32 PM Please respond to ciras Subject: New Laggon Regs

Dear Sir,

I am wastewater treatment operator. I maintain five lagoons that is in the Equus Beds. I am in favor of putting monterating wells in all lagoons that are grandfather. The wells I believe should be tested at least every quarter. This well help KDHE and DWR to see if other lagoons can be put into the area. If you have questions for me please e-mail me our you can contact me 316-204-9690

Chris Rasmussen Public Works Director City of Mount Hope



Dorothy Geisler

04/28/03 09:03 AM

To: "Johnson, Carl" < Carl. Johnson @Williams.com>

cc: (bcc: Don Carlson/Kdhe)

Subject: Re: Corel Presentation material

The presentation given at the meeting is on our website at http://www.kdhe.state.ks.us/indust/ProposedPondRegs.pdf

No minutes were taken of the meetings. The meetings were tape recorded in case we needed clarification of comments however those will probably not be transcribed.

Let me know if you have any questions.

Dorothy Geisler Bureau of Water - Industrial Programs Section 1000 SW Jackson, Ste. 420 Topeka, KS 66612-1367 (785) 296-5545 DGeisler@kdhe.state.ks.us "Johnson, Carl" < Carl. Johnson @Williams.com>



"Johnson, Carl" <Carl.Johnson@Williams

.com>

04/25/2003 08:01 AM

To: <dgeisler@kdhe.state.ks.us>

Subject: Corel Presentation material

Your name was mentioned in a paper as a contact person that could send me the Corel presentation about the latest Wastewater Lagoon Regulations. I missed the meeting and was wanting to review any additional information that you might have.

Was there any minutes kept at these meetings with regards to questions and comments that might have been asked?

Thanks

Carl Johnson Williams Energy Services 62-834-7309